

WHAT IS CLAIMED IS:

1 1. A motor system for a tank of a batch freezing machine or
2 smaller machine for mixing and chilling ice cream, the motor system
3 comprising a variable speed motor having a speed control, the speed control
4 allowing the motor speed to be chosen across a spectrum of more than two
5 speeds.

1 2. The system of Claim 1 wherein the variable speed motor has a
2 reverse speed.

1 3. The system of Claim 2 wherein the spectrum is a continuous
2 spectrum.

1 4. An ice cream machine, the ice cream comprising a cooling
2 chamber including an auger, the auger being operable in a forward motion
3 and a reverse motion.

1 5. The machine of Claim 4, further comprising a gate at an output
2 of the cooling chamber, the gate metering the flow of ice cream from the
3 cooling chamber.

1 6. The ice cream machine of Claim 5, further comprising:
2 an aperture at the output of the cooling chamber, the aperture for
3 receiving semi-solid and solid inclusions.

1 7. The ice cream machine of Claim 6 wherein the solid or semi-
2 solid inclusions are mixed into ice cream within the cooling chamber by
3 operating the auger in the reverse motion and introducing the inclusions
4 through the aperture.

1 8. The machine of Claim 4 wherein the auger motor is driven by a
2 motor, the motor being a variable speed motor, the motor capable of
3 operating at more than two speeds.

1 9. The ice cream machine of Claim 5 wherein the gate is provided
2 on a door that covers an end of the cooling chamber.

1 10. The ice cream machine of Claim 9 wherein the door includes an
2 aperture for introducing solid and semi-solid inclusions.

1 11. The ice cream machine of Claim 10 wherein a temperature
2 sensor is provided through the door or a rear of the cooling chamber.

1 12. The ice cream machine of Claim 10 wherein the door is
2 manufactured from plastic.

1 13. The ice cream machine of Claim 11 wherein the door is a food
2 grade plastic.

1 14. A system for dispensing ice cream from a machine for making
2 ice cream having a tank for mixing and freezing the ice cream, the system
3 comprising:

4 means for mixing ice cream in the tank; and

5 means for controlling the means for mixing; wherein mixing is
6 controlled at more than two forward speeds or in a forward and reverse
7 motion.

1 15. The system of Claim 17 wherein the means for mixing includes
2 an auger and a variable speed motor.

1 16. The system of Claim 18 wherein the means for controlling
2 includes a keypad.

1 17. The system of Claim 18 further comprising a door having an
2 aperture.

1 18. A method of mixing ice cream in a tank for mixing and freezing
2 the ice cream, the method comprising:

3 mixing the ice cream at a first speed;

4 adding semi-solid or solid inclusions to the tank; and

5 mixing the semi-solid or solid inclusions at a second speed.

1 19. The method of Claim 18 wherein the first speed is a forward
2 speed and the second speed is a reverse speed.

1 20. The method of Claim 19 wherein the solid and semi-solid
2 inclusions enter the tank through an aperture near an output of the tank.